



Reply to Office Action of September 9, 2005

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claims 1-84 (canceled)

Claim 85 (new): A method for inducing autoantibodies against a pathogenic self-protein in a subject, said method comprising:

administering to the subject an analog of the pathogenic self-protein, wherein said analog is made by substituting one or more peptide fragments in the pathogenic self-protein with a corresponding number of immunodominant foreign T-cell epitopes such that the tertiary structure of the pathogenic self-protein is essentially preserved;

wherein said immunodominant foreign T-cell epitopes elicit a T-cell response in multiple MHC-haplotypes; and

wherein autoantibodies against said pathogenic self-protein are generated in a heterogeneous MHC-population.

Claim 86 (new): The method of claim 85, wherein said immunodominant foreign T-cell epitopes are inserted so as to preserve flanking regions from the original pathogenic self-protein on both sides of the T-cell epitope.

Claim 87 (new): The method of claim 85, wherein the immunodominant foreign T-cell epitopes originate from tetanus toxoid or diphtheria toxoid.

Claim 88 (new): An autovaccine against pathogenic self-proteins in humans or animals comprising:

an analog of a pathogenic self-protein made by substituting one or more peptide fragments in the pathogenic self-protein with a corresponding number of immunodominant foreign T-cell epitopes such that the tertiary structure of the pathogenic self-protein is essentially preserved; wherein said immunodominant foreign T-cell epitopes elicit a T-cell response in multiple MHC-haplotypes; and a pharmaceutically acceptable adjuvant.

Claim 89 (new): The autovaccine of claim 88, wherein the pharmaceutically acceptable adjuvant is selected from the group consisting of calcium phosphate, saponin, quil A and biodegradable polymers.

Claim 90 (new): The autovaccine of claim 88, wherein the pathogenic self-protein analog is present in the form of a fusion protein with an immunologically active cytokine.

Claim 91 (new): The autovaccine of claim 90, wherein the immunologically active cytokine is selected from the group consisting of GM-CSF and interleukin 2.

Claim 92 (new): The autovaccine of claim 88, wherein the pathogenic self-protein is TNF α or γ -interferon.

Claim 93 (new): A method for the treatment of cachexia comprising administration of an effective amount of the autovaccine of claim 92.

Claim 94 (new): The autovaccine of claim 88, wherein the pathogenic self-protein is IgE.

Claim 95 (new): A method for the treatment of allergy comprising administration of an effective amount of the autovaccine of claim 94.

Claim 96 (new): The autovaccine of claim 88, wherein the pathogenic self-protein is TNF α , TNF β or interleukin 1.

Claim 97 (new): A method for the treatment of chronic inflammatory diseases comprising administration of an effective amount of the autovaccine of claim 88.

Claim 98 (new): A method for the treatment of rheumatoid arthritis or inflammatory bowel disease comprising administration of an effective amount of the autovaccine of claim 88.

Claim 99 (new): The autovaccine of claim 88, wherein the pathogenic self-protein is TNF α .

Claim 100 (new): A method for the treatment of diabetes mellitus comprising
administration of an effective amount of the autovaccine of claim 99.